Amendment I to the 2004 Chesapeake Bay Oyster Management Plan

September 6, 2010

Introduction

The 2004 Chesapeake Bay Oyster Management Plan, adopted in 2005, was developed as both a general framework and specific guidance for rebuilding and managing the native oyster, *Crassostrea virginica*. The plan combined the general goals of the 1994 Oyster Management Plan and the 1994 Aquatic Reef Habitat Plan into a comprehensive approach. The objectives of the 2004 plan were to manage for the diseases MSX (*Haplosporidium nelsoni*) and dermo (*Perkinsus marinus*); create oyster sanctuaries to provide spawning stock, encourage disease resistance, and provide ecological benefits; manage harvest by developing biological reference points; increase hatchery production to augment natural reproduction, reduce disease effects, and increase biomass; develop the aquaculture industry; and increase monitoring to track oyster abundance.

In 2005, the Maryland General Assembly enacted legislation creating the Maryland Aquaculture Coordinating Council (MACC). This body included representatives from industry, academia, and government and was charged with the development of best management practices for aquaculture in Maryland. The best management practice report issued by the MACC (2007) recognized the ecological benefits oysters may provide while also providing economic benefits. Based on recommendations by the MACC, the Maryland General Assembly unanimously passed a law (Ch.173, Acts of 2009) facilitating aquaculture by increasing the amount of submerged land or water column available for leasing (cultivating oysters or other shellfish for commercial purposes).

In 2007, Maryland Governor Martin O'Malley announced the formation of the Oyster Advisory Commission (OAC). The task of this commission is to advise the Department of Natural Resources on the development of new strategies to minimize disease impacts, maximize ecological benefits of oyster bars, and improve enforcement in closed areas. Furthermore, the commission is to examine the overall management of natural oyster bars through a cost-benefit analysis that considers biological, ecological, economic, and cultural issues. In its 2008 legislative report, the OAC (2009) recommended focusing ecological restoration efforts on a river-wide scale and developing an oyster industry based primarily on aquaculture.

In 2009, the U.S. Army Corps of Engineers and partners issued a Programmatic Environmental Impact Statement (USACE 2009) addressing oyster restoration in Chesapeake Bay. The report concluded that inherent conflicts exist between the restoration of wild oyster populations to achieve ecological benefits and the restoration of the economic benefits of the oyster fishery. To resolve these conflicts, the report recommended several measures, including the enhanced restoration of native oysters, the implementation of more restrictive harvesting regimes, and the expansion of native oyster aquaculture.

Based on the recommendations of the OAC, USACE, MACC, as well as the requirements of the 2009 lease law, the Maryland Department of Natural Resources developed a 10-point Oyster Restoration and Industry Revitalization plan for oysters. The main objectives of this plan are to

expand the oyster sanctuary program, shift commercial oyster production to aquaculture, and develop a more targeted, scientifically managed and sustainable wild oyster fishery. Given the new vision for oysters, the 2004 Chesapeake Bay Oyster Management Plan will need to be revised. Until the revision is completed, this amendment will allow the expansion of the sanctuary program and growth of an aquaculture industry.

An expanded sanctuary program is intended to enhance natural recruitment within and outside of the sanctuary area, encourage disease resistance through natural selection, and provide ecological services such as water filtration and habitat for other species. With new larger oyster sanctuaries being proposed, Maryland citizens expressed concern about restrictions on activities within sanctuaries that may not negatively impact sanctuary goals. These activities include clamming and aquaculture. This amendment clarifies activities permitted within oyster sanctuaries.

IV. Oyster Sanctuaries

Activities Allowed in Sanctuaries

According to the current oyster management plan (CBP 2005), all shellfish harvest is prohibited in oyster sanctuaries. Some activities currently prohibited within oyster sanctuaries will not negatively impact oysters, but may positively impact oyster production. The Maryland Department of Natural Resources is amending Section IV of the 2004 Chesapeake Bay Oyster Management Plan (Oyster Sanctuaries) to allow clamming in certain sanctuaries and provide for aquaculture activities.

Aquaculture in Sanctuaries

Aquaculture leases in sanctuary areas are currently prohibited under the 2004 Chesapeake Bay Oyster Management Plan because it was believed that all forms of shellfish harvest were detrimental to shellfish restoration. Over the past year, the concept of sanctuaries has evolved to mean something different than its original intent. Due to the changed concept of a sanctuary, the Department believes that aquaculture can be compatible to restoration by adding to localized water quality improvements, providing ecosystem functions through oyster shell habitat creation, and enhancing natural recruitment within the sanctuary when reproductive oysters are used. Therefore, aquaculture operations may be permitted in sanctuaries under certain conditions in the future.

Clamming

All shellfish harvest from sanctuaries is currently prohibited under the 2004 management plan. Newly-proposed sanctuaries are much larger than previously-existing sanctuaries, and extend over broad geographic areas that include currently legal commercial clamming areas. The intent of the expanded oyster sanctuary network is not to prohibit the commercial and recreational harvest of clam species (soft clam, *Mya arenaria*; razor clam, *Tagelus plebeius*; and hard clam, *Mercenaria mercenaria*). Therefore, the oyster management plan should not exclude clamming from within the newly proposed sanctuary boundaries. Clam harvesting within sanctuaries must be conducted outside of a 150 ft. buffer around any oyster bar as described by the charts of the oyster survey of 1906 to 1912, and amendments or any leased area (Natural Resources Article, §4-1037, Annotated Code of Maryland) to avoid physical damage to oyster reefs as well as

damage from sedimentation (Manning 1957, Tarnowski 2006). All other laws governing clamming outside of sanctuaries apply within sanctuaries as well.

<u>This amendment deletes:</u>

Strategy 4.2

C) Prohibit shellfish harvest and enforce restrictions.

<u>This amendment adds the following new strategy:</u>

Strategy 4.2

C) Allow aquaculture activities and clamming in certain sanctuary areas and develop appropriate enforcement measures.

<u>This amendment adds the following actions:</u>

Action 4.2.7

Seek legislative change to allow the use of aquaculture leases in sanctuaries.

Action 4.2.8

Allow the harvest of clams within oyster sanctuaries.

a) Maintain a 150 ft buffer around any natural oyster bar or leased area.

b) Follow all laws/regulations that govern commercial and recreational clamming.

Enforcement

Allowing aquaculture and clamming activities within sanctuary areas will require appropriate enforcement measures to protect wild oysters and their reef habitat. New enforcement measures will need to be identified and implemented.

<u>This amendment deletes:</u>

Strategy 4.6

To facilitate the enforcement of closed areas, especially sanctuaries, the following actions will be implemented.

Action 4.6.1

Sanctuaries will be placed in geographically distinct areas with enough space to create a buffer zone between harvest and sanctuary areas to enable enforcement.

Action 4.6.2

Sanctuaries will be buoyed and marked. The public will be encouraged to report any violations.

Action 4.6.3

The public and judiciary will be notified about sanctuary areas through educational initiatives, public announcements and stakeholder meetings.

Action 4.6.4
New enforcement measures will be identified and implemented. Additional manpower will be recommended if necessary.

This amendment replaces the above strategy and actions with the following strategy and actions:

Strategy 4.6
Develop appropriate enforcement actions that will result in the protection of wild oysters in sanctuaries while allowing clam harvest and aquaculture activities.

Action 4.6.1
Utilize the Maryland Law Enforcement Information Network (MLEIN), a monitoring system using radar, day cameras, and infrared detectors, to monitor activity in sanctuaries. The MLEIN system will allow Natural Resources Police to detect poaching over a broad geographic area.

Action 4.6.2
Work with the Maryland District Court to prosecute natural resources violations, including illegal shellfish harvest violations. Currently, a pilot program in Anne Arundel County sets aside one day each month to try natural resources violations. If successful, the pilot program will be expanded to other counties.

V. Managing Harvest

This amendment adds the following section, strategy and actions:

Sanitary Control of Shellfish

The National Shellfish Sanitation Program (NSSP) is the federal/state cooperative program recognized by the U. S. Food and Drug Administration (FDA) and the Interstate Shellfish Sanitation Conference (ISSC) for the sanitary control of shellfish produced and sold for human consumption. Through membership with the NSSP and the ISSC, Maryland has agreed to enforce the Model Ordinance for the sanitary control of molluscan shellfish (National Shellfish Sanitation Program Model Ordinance as described in COMAR 10.15.07.01A). The Model Ordinance includes the minimum requirements necessary to ensure that the shellfish produced in states are sanitary and safe for human consumption.

The ISSC and the FDA are concerned with the ability to accurately trace shellfish to the harvest area and harvest date in the event of an illness or some unforeseen contamination event. The NSSP Model Ordinance requires that harvesters identify the shellstock before it is transported to a dealer. A harvester tag is required on each individual container or a bulk tag can be utilized for a contained shipment. The requirements are listed in the National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish Model Ordinance in Chapter VIII. To date, Maryland has not implemented a harvester tag.

Strategy 5.5
Follow the sanitation guidelines established by the National Shellfish Sanitation Program and the Interstate Shellfish Sanitation Conference for the sanitary control of shellfish produced and sold for human consumption.

Action 5.5.1
Each harvester will affix a tag to each container of shellstock while the shellstock is being transported to a dealer. The tag will include the necessary information to meet the Model Ordinance guidelines and identify the harvester, date, the most precise identification of the harvest location or aquaculture site, and the type and quantity of shellstock.

Action 5.5.2
Each dealer will be required to meet the Model Ordinance guidelines and keep tags on file for 90 days.

Action 5.5.3
The Model Ordinance tagging system may be incorporated into a harvest tracking system with additional requirements.

Literature Cited

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